Performance Composites
1418 S. Alameda St.
Compton, CA 90221
ID: 140552

EQUIPMENT DESCRIPTION

A/N 468756:
SPRAY BOOTH, FLOOR TYPE, 25'-0" W. X 15'-0" L. X 9'-0" H., WITH NATURAL GAS FIRED HEATER, 400,000 BTU/HR, TWENTY 20" X 20" EXHAUST FILTERS AND ONE 2 HP EXHAUST FAN.

A/N 468757: Title V permit revision

BACKGROUND

Performance Composites submitted a/n 468756 to obtain a Permit to Construct for a heated spray booth. The booth will be purchased from Fibernetics (ID 140550) and is currently permitted under F88263 (a/n 429718). Currently Performance Composites operates eight spray booths under a facility-wide VOC cap of 289 lb/day and will operate this booth under this limit, as well as an individual equipment limit of 850 lb/month.

Performance Composites is a Title V facility. An initial Title V permit was issued to this facility on June 18, 2006. Performance Composites has proposed to revise this Title V permit by adding one spray booth. The permit revision is considered as a "de minimis significant permit revision" to the initial Title V permit, as described in Regulation XXX evaluation.

PROCESS DESCRIPTION

Performance Composites manufactures a variety of fiberglass products, including underground utility vaults, ATM surroundings, machine covers, showers and urinals. They essentially operate in a "job shop" fashion, receiving and completing various job requests. The new booth will be used to paint computer panels/covers, police service units, bus consoles and assorted covers for adhesive dispensing units. They plan to use a single-component Rule 1145 compliant topcoat. The new booth will not be used on a regular basis, but rather as needed.

EMISSION ESTIMATES

VOC Emissions:
Max. monthly limit = 850 lb/mon
Daily VOC emissions = 850 lb/mon ÷ 30 days/mon = 28.3 lb/day
Hourly VOC emissions = 28.3 lb/day ÷ 10 hr/day = 2.83 lb/hr

PM10 Emissions:
Estimated maximum daily coating usage = 4 gal/day
Coating density = 10.3 lb/gal
% Solids by weight = 48.1%
Transfer efficiency = 65% (HVLP spray gun)
PM10 = 0.5PM
Filter efficiency = 90%

Uncontrolled daily PM10 emissions:
= 4 gal/day x 10.3 lb/gal x 0.481 x (1 - 0.65) x 0.5 = 3.5 lb/day

Uncontrolled hourly PM10 emissions:
= 3.5 lb/day ÷ 10 hr/day = 0.35 lb/hr

Controlled daily PM10 emissions:
= 3.5 lb/day x (1 - 0.9) = 0.35 lb/day

Controlled hourly PM10 emissions:
= 0.35 lb/day ÷ 10 hr/day = 0.035 lb/hr

Emissions due to the combustion of natural gas were determined using emission factors from the EPA AP42. Emissions are based on a maximum firing rate of 0.4 MMBtu/hr and an operating schedule of 10 hr/day.

ROG emission factor = 7.0 lb/MMft^3
NOx emission factor = 130 lb/MMft^3
CO emission factor = 35.0 lb/MMft^3
SOx emission factor = 0.83 lb/MMft^3
PM10 emission factor = 7.5 lb/MMft^3

Max. hourly ROG emissions = 0.4 MMBtu/hr x 7 lb/MMft^3 x ft^3/1050 Btu = 0.003 lb/hr
Max. daily ROG emissions = 0.003 lb/hr x 10 hr/day = 0.03 lb/day

Max. hourly NOx emissions = 0.4 MMBtu/hr x 130 lb/MMft^3 x ft^3/1050 Btu = 0.04 lb/hr
Max. daily NOx emissions = 0.04 lb/hr x 10 hr/day = 0.4 lb/day

Max. hourly CO emissions = 0.4 MMBtu/hr x 35 lb/MMft^3 x ft^3/1050 Btu = 0.01 lb/hr
Max. daily CO emissions = 0.01 lb/hr x 10 hr/day = 0.1 lb/day

Max. hourly SOx emissions = 0.4 MMBtu/hr x 0.83 lb/MMft^3 x ft^3/1050 Btu = 0 lb/hr
Max. daily SOx emissions = 0 lb/day

Max. hourly PM10 emissions = 0.4 MMBtu/hr x 7.5 lb/MMft^3 x ft^3/1050 Btu = 0.003 lb/hr
Max. daily PM10 emissions = 0.003 lb/hr x 10 hr/day = 0.03 lb/day

Total Emissions Summary

Pollutant	Hourly Emissions (lb/hr)	Daily Emissions (lb/day)
ROG	2.83	28.3
NOx	0.04	0.4
CO	0.01	0.1
PM10 (uncontrolled/controlled)	0.35/0.035	3.5/0.35

RISK ANALYSIS

The coating contains ethylene glycol monobutyl ether, a Rule 1401 acute Toxic Air Contaminant (TAC). Emissions of this TAC are calculated and compared with the Tier 1 Screening Emission Levels (SEL) at the most conservative receptor distance of 25 meters. Since the estimated TAC emissions are less than the Screening Emission Levels, further analysis is not required. It can be concluded that the use of the proposed coating will not cause an acute health hazard risk.

Coating density = 10.3 lb/gal
% weight of ethylene glycol monobutyl ether = 5% max

Hourly ethylene glycol monobutyl ether emissions:
= 20 gal/day x 10.3 lb/gal x 0.05 ÷ 10 hr/day = 1.03 lb/hr

TAC	Estimated Emissions (lb/hr)	Estimated Emissions (lb/yr)	SEL (lb/hr)	SEL (lb/yr)
Ethylene glycol monobutyl ether	1.03	-	7	-

RULE ANALYSIS

RULE 212: Public notification is not necessary since (1) there will not be an emission increase exceeding the threshold of (g), (2) the facility is not located within a 1,000 feet of a school and (3) there will not be a cancer risk of one in a million. The VOC emission increase from the spray booth will be 28 lb/day. The spray booth will be limited to 850 lb/month (28 lb/day). The spray booth will be operated under the existing facility cap, no net emission increase.

RULE 401: Visible emissions are not expected with the proper operation of this equipment.

RULE 402: With proper operation and maintenance, the operation of this equipment is not expected to create a nuisance.

RULE 1145: Performance Composites will operate the spray booth in compliance with this rule. The VOC content of the proposed coating is at the rule limit, 1.0 lb/gal and an HVLP spray gun will be used.

RULE 1171: Water will be used for cleaning purposes.

RULE 1303:
(a): The VOC emission increase will be 28 lb/day and since it is less that 39 lb/day, add-on control equipment is not required.

(b)(1): Hourly PM10 emissions are 0.038 lb/hr, below the threshold of 0.41 lb/hr, modeling is not required.

(b)(2): Emission offsets are not required since there is not an emission increase above the current facility VOC cap.

(b)(4): The facility is expected to be in full compliance with all applicable rules and regulations of the District.

RULE 1401: A single acute TAC will be emitted from the use of the proposed coating. Emissions are below Tier 1 Screening Emission Levels. The acute health hazard risk is well below 1. The proposed project with comply with this rule.

REGULATION XXX:

The proposed project is considered as a "de minimis significant permit revision" to the Title V permit issued to this facility. Rule 3000(b)(6) defines a "de minimis significant permit revision" as any Title V permit revision where the cumulative emission increases of non-RECLAIM pollutants or hazardous air pollutants (HAP) from these permit revisions during the term of the permit are not greater than any of the following emission threshold levels:

Air Contaminant	Daily Maximum (lb/day)
HAP	30
VOC	30
NOx	40
PM10	30
Sox	60
CO	220

Rule 3003(j) specifies that a proposed permit for a Title V permit revision shall be submitted to EPA for review. To determine if a project qualifies for a "de minimis significant permit revision", emission increases resulting from all permit revisions that are made after the issuance

of the initial Title V permit shall be accumulated and compared to the above threshold levels. This is the second permit revision requested by the facility. The cumulative emission increases resulting from this proposed permit revision are summarized as follows:

Revision	HAP	VOC	NOx	PM_{10}	SOx	CO
Previous Permit Revision Total	0	0	0	0	0	0
2nd Permit Revision: Add spray booth	0	0	0	0	0	0
Cumulative Total	0	0	0	0	0	0
Maximum Daily	30	30	40	30	60	220

RECOMMENDATION:

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "de minimis significant permit revision", it is exempt from the public participation requirements under Rule 3006 (b). A proposed permit incorporating this permit revision will be submitted to the EPA for a 45-day review pursuant to Rule 3003(j). If the EPA does not raise any objections within the review period, a revised Title V permit will be issued to this facility.

perf comp -SB 468756 2nd rev